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Passport 4400 Release Notes for R4.0

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Chapter 1

Introduction

This document provides information on the Passport 4400, Release 4.0 product available for general customer release. This document includes information about the Passport 4400 unit, the system software, Command Line Interface (CLI), Passport 4400 Configurator, and Install Tool. You will find information on the software files, the documentation, and the new features. Additionally, there is a section on current known issues with the software and a section for manual updates.



Note: Release Notes are updated on an as needed basis. Please check the Web Page (<http://support.baynetworks.com/library/tpubs>) to find out if there is a more current revision.

Occasionally, throughout this document, you will find at the end of a sentence or paragraph an 8-digit number in parenthesis (for example, 60058007 or 10265987). This number is an internal Service Request (SR) number used to track problems and fixes to the product software or its documentation.

Documentation

The documentation consists of the following:

- Passport 4400 Hardware Installation Manual, 800-1951-40 (provided in hard copy with your Passport unit)
- Using Passport 4400 Install Tool Version 4.0, 800-1983-40 (provided in hard copy in the Passport software kit)

- Passport 4400 Release 4 Configuration and Operation Document (provided on CD-ROM, this is software documentation for the system and all module options - except LDM - describing configuration/provisioning using the Passport 4400 Configurator and CLI)
- Release Notes, 800-1953-40 (this document)
- Legacy Data Services Manual, 800-1961-20, Rev B (describes the LDM software)
- Passport 6400, 4400 Interworking Guide, 241-6401-115
- Passport 4400 and 6400 Quick Start Guide, 241-6401-280

These documents are directly accessible from Web Page URL:

<http://support.baynetworks.com/library/tpubs>. Select Passport 4400, then Release 4.0. The documents are accessed from the links shown. We recommend that you save the document locally and then open it. These documents are also available on the software/documentation CD-ROM. These documents may be undated, so to ensure the most recent version, refer to the web page.

Online Documentation

Passport 4400 Configurator Documentation URL Update

When you have installed the online documentation, you must set the documentation URL for the Passport 4400 Configurator in order to be able to access the online documentation (Passport 4400 Release 4 Configuration and Operation Document) from within the Passport 4400 Configurator.

This URL can only be changed through the Passport 4400 Configurator web pages.

- 1 Click on *Administration*.

- 2 Click on *Document URL*. The Documentation URL window opens:

Documentation URL [Pub: B]

Documentation Server URL:

The URL in the window is where the online documentation is located, at the Nortel Internet site, on your PC, workstation, server, or on the CD at your PC.

- 3 If you have downloaded the documentation elsewhere, enter the URL in the Documentation Server URL field, and click *Save*. A “*Command Successful*” appears.

Accessing the Online Documentation



Note: Documentation is sometimes updated and posted on the web page, <http://support.baynetworks.com/library/tpubs/passport/v40/index.html>. Check that location to ensure that you have the latest version.

- Directly access the documentation:
 - *From the Internet*, you can access the documentation from this URL:
<http://support.baynetworks.com/library/tpubs/passport/v40/index.html>
 - *From the Passport 4400 Software/Documentation Distribution CD ROM*, you can access the documentation using a PC from this path:
`D:\docs\Config_Ops_Doc\index.html`
 (where *D*: is the drive letter of your PC's CD ROM)
- Open the documentation:



Note: Some browsers require special setup. See the Browser Information section, which follows.

- If you are using the Passport 4400 Configurator, click on the Documentation link in the navigation menu. The online documentation will display in a new browser window.
- *If you have installed the online documentation onto your PC's hard drive*, you can access the documentation by opening the file named index.html, located in the directory where you installed the documentation.
- *If you have installed the online documentation on a Web server*, the URL you must use depends on where the documentation is installed on the server and how the Web site is configured and managed by the server's administrator or WebMaster. An example URL could be the following:

`http://yugi/`

(This URL assumes that the server's name is yugi, the documentation is in the root directory of the Web site established on the server, and that index.html is the default file that is served when the Web site is accessed.)

The server name “yugi” can be resolved by DNS; otherwise, use your server's IP address. An example could be the following:

`http://192.168.1.1`

Browser Information

The Passport 4400 Release 4 Configuration and Operation Documentation (hereafter referred to as The Online Documentation) has been tested with the following browsers:

- Microsoft Internet Explorer 3, 4, and 5
- Netscape Communicator 4.5, 4.6, and 4.7
- Netscape Navigator 3 and 4
- Opera 3.60
- Mosaic 3

The Online Documentation has been tested with the following operating systems:

- Microsoft Windows 95
- Microsoft Windows NT 4, Workstation and Server

The best results are obtained when using the following combination:

Microsoft Internet Explorer 4 and 5 on a Pentium PC running Microsoft Windows 95 or NT, having a display of 800 by 600 minimum resolution and capable of displaying 32,000 colors or more.

Use the following table to get the optimum results from the browser you are using.

Browser	How to Get Optimum Results
Microsoft Internet Explorer 4 or 5	Normal browser setup will provide optimum results.
Microsoft Internet Explorer 3	<p>For best results, you should set the browser to disable using style sheets:</p> <ol style="list-style-type: none"> 1. Select View -> Options and select the Advanced tab. 2. Uncheck the box next to Use style sheets. 3. Click on the Apply button. <p>Also, you should choose the No Frames option from the online documentation startup page. The frameset for the online documentation may not be stable in Microsoft Internet Explorer 3. You may encounter pages displayed outside of the frameset.</p>
Netscape Communicator 4.5, 4.6, 4.7	<p>As a minimum, you should make sure the browser window size is at least 800 by 600 pixels. If you must run the browser in a smaller window size or you encounter display problems, you should set the browser to Disable using styles sheets:</p> <ol style="list-style-type: none"> 1. Select Edit -> Preferences and select Advanced. 2. Uncheck the box next to Enable style sheets. 3. Click on the OK button.
Netscape Navigator 4.08	<p>As a minimum, you should make sure the browser window size is at least 800 by 600 pixels. If you must run the browser in a smaller window size or you encounter display problems, you should set the browser to Disable using styles sheets:</p> <ol style="list-style-type: none"> 1. Select Edit -> Preferences and select Advanced. 2. Uncheck the box next to Enable style sheets. 3. Click on the OK button.
Netscape Navigator 3	<p>Normal browser setup will provide optimum results. However, Navigator 3 does not support cascading style sheets, so the browser's default fonts are used. Navigator 3 uses serif fonts, black on a white background, as the default display.</p>

Browser	How to Get Optimum Results
Opera 3.60	Normal browser setup will provide optimum results.
Mosaic 3	Normal browser setup will provide optimum results. However, Mosaic 3 does not support frames or cascading style sheets. The browser's default font set is used. Also, when you access the Passport 4400 Configuration and Operation Documentation with Mosaic 3, you will see a message that the browser does not support frames. Just click on the link provided to use the documentation without the frameset.

Navigating the Passport 4400 Release 4 Configuration and Operation Documentation (Online Documentation)

The *next* and *previous* buttons in the document pages navigate you through the pages sequentially. If, for example, you have jumped (hyperlinked) to a new page and wish to return to your previous location, use the *back* button in the browser.

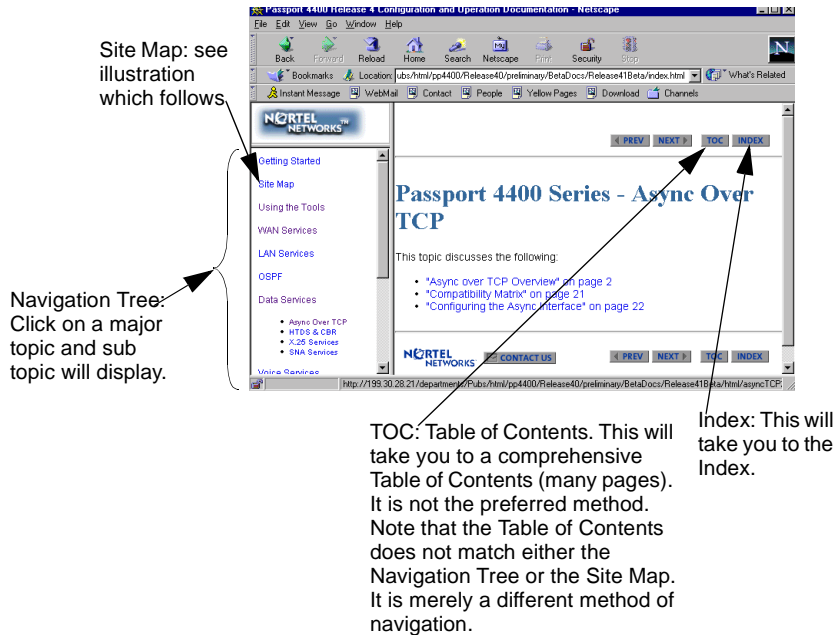
BACK. Returns you to the previous display. This is good for jumping between procedures or returning to the previous screen after a hyperlink jump.

PREV. This takes you to the previous page in the document regardless of how you got to this page. Do not confuse this PREV with BACK.

NEXT. This takes you to the next page in the document regardless of how you got to this page.

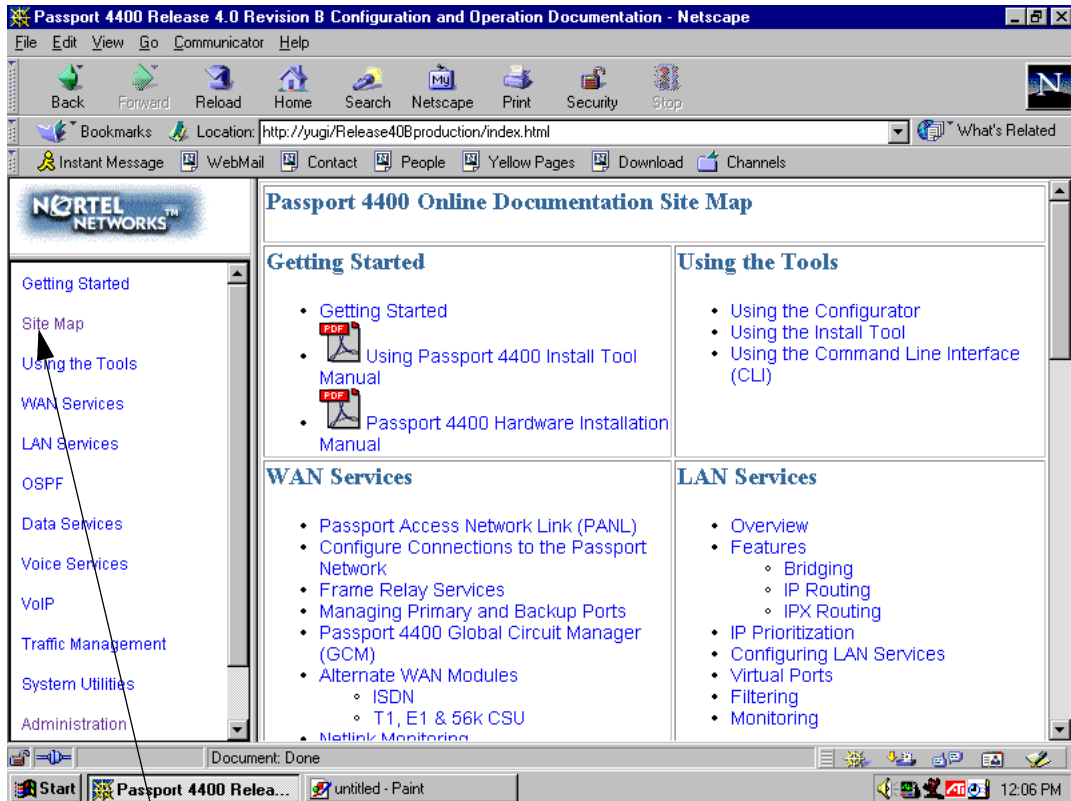
There are four navigation tools to help you locate the information you require:

- the navigation tree in the left window.
- the table of contents accessible from the TOC button on each page.
- the index accessible from the index button on each page.
- the site map in the right window (accessed from the navigation tree). This is shown on next page.



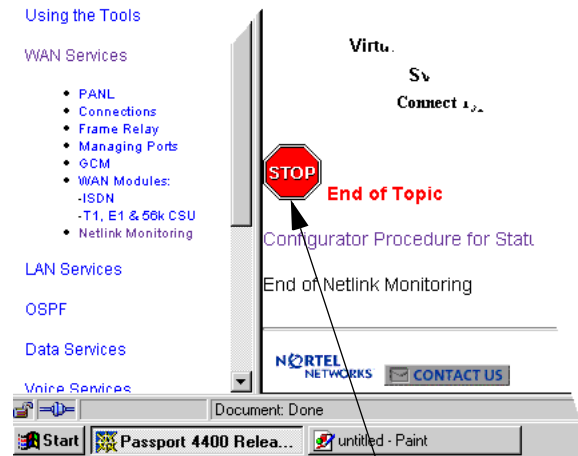
Site Map

The site map is an expanded version of the Navigation Tree. It permits you to browse through the documents to select the items you wish to view.

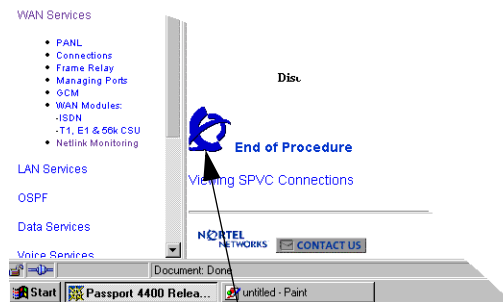


From any place in the documentation, select Site Map from the Navigation Tree to display the Site Map.

Within the documentation, there are two additional aids to help you: the end of topic sign and the end of procedure. When you see these aids, you have reached the end of the logical discussion. By pressing *next* you will be moved to new topic which may be completely unrelated.



This is the end of this topic. By pressing the next button, you may or may not be at the next logical topic.



This lets you know that this procedure is now complete.

Printing Online Documentation

In some cases, the HTML pages will not print properly. For print purposes, a copy of the documentation in PDF form is provided (config_ops_doc.pdf). Use the PDF file for printing requirements. It is recommended that you use a PostScript printer driver. (60101046, 60106502)

Passport 4400 Hardware Requirements

- Make sure that you have the 16 MB Flash SIMM installed.
- Ethernet Base Module: NTAU01BA or later.
 - Model BA is required to support the hardware compression SIMM.
 - If you do not require hardware compression, you can use an NTAU01AA, Rev .08 or later and upgrade it to 16MB Flash.
 - NTAU01CA Rev .05 or later is required to support the new ISDN module NTAU76CA, Rev .03 or later. If you are installing the new ISDN-BRI Module NTAU76CA, and you are unsure of the base module, contact your Certified Distributor and request that they contact Nortel Networks (refer to ECO E400399).
 - In a Passport 4450, if the ISDN Module is in the top slot, you must use Rev .03 or later.



Note: All Ethernet Base Modules shipped after January 2000 will be NTAU01CA, Rev .05 or later.

- HDM 8-port Module: Your HDM must be Rev .06, but it is recommended you use Rev .08 or later. There is a known problem with Rev .05 and earlier that requires a factory upgrade. For additional information, contact your Certified Distributor.

Checking Your Ethernet Base Module Part Number

The face plate on the Ethernet Base Module contains a tag with your part number.

Software and Documentation CD-ROM

Copy the appropriate files from the CD-ROM to your TFTP server. The CD-ROM contains files for the following items:

- Software
 - Install Tool
 - Passport 4430/50
 - Passport 4455
 - Legacy Data Module
- All Product Documentation

Software

Install Tool

- it400104.exe

Passport 4430/50

- bt4002418.bld (Passport 4430/50 boot code)
- bt4002418.bin (Passport 4430/50 boot code binary image)
- pr4002418.bld (Passport 4430/50 application code)
- pr4002418.tar (Passport 4430/50 MIB files in tar format)
- pr4002418.zip (Passport 4430/50 MIB files in zip format)
- rs4002418.pdf (These Release Notes in PDF format)
- rs4002418.ps (These Release Notes in PostScript format)

Boot Code: Passport_4430/50_Boot_Rel_4.0.0_Rev 2.41.8 05/17/00 08:08:39

Application Code: Passport_4430/50_Appl_Rel_4.0.0_Rev 2.41.8 05/17/00 08:09:04

Passport 4455

- thb4002418.bld (Passport 4455 boot code)
- thb4002418.bin (Passport 4455 boot code binary image)
- th4002418.bld (Passport 4455 application code)

- th4002418.tar (Passport 4455 MIB files in tar format)
- h4002418.zip (Passport 4455 MIB files in zip format)
- rs4002418.pdf (These Release Notes in PDF format)
- rs4002418.ps (These Release Notes in PostScript format)

Boot Code: Passport_4455_Boot_Rel_4.0.0_Rev 2.41.8 05/17/00 08:48:49

Application Code: Passport_4455_Appl_Rel_4.0.0_Rev 2.41.8 05/17/00 08:49:08

LDM

- ACCGFELX.FIM0200 (LDM code 2.0 for Passport 4400)
- r020.pdf (Release Notes for LDM code 2.0 in PDF format)
- r020.ps (Release Notes for LDM code 2.0 in PostScript format)

All Product Documentation

- m195140a.pdf (Hardware Installation Manual)
- m198340a.pdf (Using Install Tool v4.0)
- 64n115.pdf (Passport 6400, 4400 Interworking Guide)
- 64n280.pdf (Passport 4400 and 6400 Quick Start Guide)
- m196120B.pdf (Low-Speed Data Services Manual) (LDM)
- config_ops_doc.pdf (Configuring and Operating Passport 4400 Software in pdf format-delivered for printing requirements)
- config_ops_doc.exe (Configuring and Operating Passport 4400 Software in self-extracting executable archive format)
- config_ops_doc.tar (Configuring and Operating Passport 4400 Software in Unix format)
- ConfigOpsDoc (Configuring and Operating Passport 4400 Software files uncompressed, accessible from the CD-ROM)
- rs4002418.pdf (These Release Notes, 800-1953-40, Rev B in Adobe Acrobat)
- rs4002418.ps (These Release Notes, 800-1953-40, Rev B in PostScript)

Application Code

The Passport 4400 application software is a single file (either thxxxxx.bld or prxxxxx.bld) supplied in a “bld” format consisting of the following six executable images:

- Ethernet Base Module code (Version Passport 4430/50. Appl. Rel. 4.0 Rev or Passport 4455/50. Appl. Rel. 4.0 Rev)
- DSP code for AVM (Version 2261 XAP)
- DSP code for UAVM (Version 2263 XAP)
- DSP code for the DVMs installed on the TVM, EVM, and DVEM (Version 2262 XAP)
- Code for the TVM (Version 909-2291 AX5)
- Code for the EVM (Version 909-2292 0A)



Note: You can show these versions by issuing the following CLI command `show system image`.

Upgrading from Previous Releases



Note: Be sure to upgrade your base unit and all your voice modules. This ensures that the unit will support all Release 4.0 functionality.

- The 16 MB Flash must be installed before upgrading. If it is not and you attempt to upgrade, an error message similar to the example will display:

```
CLI>
Bus Error
Program Counter: 0x11008b36
Status Register: 0x3004
Access Address : 0xffffffff
Special Status : 0x0085
Task: 0x11c381dc "TftpHndlr"
WachDogTask: TftpHndlr task is suspended with taskStack info:
11266650          : 11140ade (0, 0, 0, 0, 0, 0, 0, 0, 0)
11140bc6          : 11141148 ([0, 0, 0, 11266652, 0])
11141218          : 11141598 ([0, 0, 0, 114a9874, 0])
1114168e          : 111418dc ([11c38126, 1, 1, 114a9874, 11c30001])
11141916          : 111430ee (11c10ae8, 200)
111433aa          : 111439a0 (2)
11143a7e          : 11143afa (11c13f28, 2, 7)
11143b8e          : 11008a8e (d5, 0)

RESETTING the system in 5 sec ...
```

Important! Always extract the latest MIBs from the software bundles and replace your old MIBs with the most current version. If there are several software versions, use the most current version of the MIBs.

Upgrading from Release 2.0



Note: You can only upgrade from 2.0, if your hardware supports the upgrade. See the Hardware Requirements.

If you are upgrading from Release 2.0.3 through 2.0.7 to Release 4.0, you must first upgrade to Release 2.0.8 or later before upgrading to Release 4.0. This phased approach will preserve your custom configuration. Refer to the Procedure for Downloading Application Software; for this upgrade, you must use the CLI procedure.

Additional Considerations:

- When upgrading from Release 2.0.9.0.1. and earlier to Release 2.0.10 and later, you must first set fax rate parameters to 7200b/s. Once the upgrade is complete, you can set the fax rate as required. Refer to [page 41](#), General Operational Notes (fax rate), for additional information. (10309543)
- When upgrading from Release 2.0.x to 4.0, any IP routing RIP compatibility parameters that were configured as RIP1 will be converted automatically to RIP1Compatible. If RIP1Compatible is not the desired RIP setting, you will need to change this parameter back to RIP1.

Upgrading from Release 3.1

Refer to the Procedure for Upgrading Application Software which follows. For this upgrade, you must use the CLI procedure.



Note: You can only upgrade from 3.1, if your hardware supports the upgrade. See the Hardware Requirements.

- IP Prioritization compatibility between Release 3.1 and Release 4.0: Do not enable IP Prioritization until all units in the network have been upgraded to Release 4.0. Release 3.1.x units do not recognize or support IP Prioritization.
- Hoot N Holler compatibility between Release 3.1 and Release 4.0: In mixed networks, the Release 4.0 units should be set to **Master**, *not Slave*.
- Idle Char parameter: In Release 3.1.3 and earlier, the default of 255 invoked the 7E idle character. In Release 3.1.4 and later, 255 sets the character to mark fill (FF). In Release 3.1.6 the default will be changed to 126 (7E), so if you factory default the unit, the idle fill character will be 7E (126). If you are upgrading from 3.1.5 or below and do not factory default the unit, you must manually change the parameter to 126 (7E). (60319119)

Upgrading from Release 4.0 (Controlled Releases)

Refer to the Procedure for Upgrading Applications Software which follows. For this upgrade, you can use either the Passport 4400 Configurator or CLI.

Downloading Software Using CLI

Procedure for Downloading Boot and Application Software Using the CLI



Note: You can use this procedure for upgrading software for all releases (including 2.0 and 3.x.x).

- 1 Load the Passport 4400 Release 4.0 software onto your TFTP server (boot and application code as required).
- 2 If necessary, start a Telnet session with the Passport 4400 and access the CLI.
- 3 If necessary, disable weighted round robin traffic management:

```
define tm weightedRoundRobin disabled
```

- 4 Download the boot code.

Example:

```
download base image specific 192.168.15.30 "bt4xxxxx.bld"
```

This will download the file bt4xxxxx.bld from the TFTP host with the IP address 192.168.15.30 (where x's represent the current version/filename).

- 5 Download the Release 4.0 application code onto the Passport 4400 using TFTP.
 - a Commit the application code bank that will be write-protected during the download.

Example:

```
set system firmware commitcodebank bank1
```

This will write-protect application code bank 1. The application code will be downloaded into bank 2.

- b** Download the application code.

Example:

```
download base image specific 192.168.15.30  
"pr4xxxxx.bld"
```

This will download the file pr4xxxxx.bld from the TFTP host with IP address 192.168.15.30. (Where x's represent the current version/ filename)

- 6** Commit the new application software to the write-protected bank.

Example:

```
set system firmware commitcodebank bank2
```

- 7** Restart the Passport 4400 unit:

```
reset system current reset
```

- 8** Reconnect to the CLI. If necessary, establish another Telnet session with the Passport 4400 unit.

- 9** Re-enable weighted round robin traffic management, if it was disabled previously:

```
define tm weightedRoundRobin enabled
```

- 10** If you used RIP1 operation, the upgrade will change the operation to RIP1compatible. To return to RIP1 operation, enter the following:

```
define ip base ripCompatibility rip1
```

- 11** The last step is to extract the latest MIBs from the software bundle and replace your old MIBs with the new ones. If there are several software versions, use the most current version of the MIBs.

Procedure for Downloading DSP and T1/E1 Module Software Using the CLI

When the Passport 4400 unit initializes for the first time using the 4.0 software, one or both of the following messages may be displayed on the CLI (60105233, 60105242):

- DSP software version on the voice module (*version number*) does not match the one in image bundle (*version number*). Downloading the new voice software is mandatory.
- E1/T1 software version on the E1/T1 module (*version number*) does not match the one in image bundle (*version number*). Downloading the new E1/T1 software is mandatory.

The following procedures should then be performed (as required):

- Downloading Voice Software
- Downloading T1/E1 Software



Note: You cannot use the Passport 4400 Configurator to perform the procedures described in this section.

Procedure for Local Download of Voice Software Using CLI

- 1 Enter the following command to download 4.0 voice software to a specific voice channel on your Passport 4400 unit:

```
CLI> download voice channel (card number) (channel number) download
```

Logical Location number:	LimB LimC LimD LimE	The location of the voice module within the Passport 4400 unit.
Channel number:	INTEGER (1..12)	The voice channel number.

- 2 Enter the following command to download 4.0 voice software to all voice channels on your Passport 4400 unit:

```
CLI> download voice allChannels download
```


Procedure for Local Download of T1/E1 Software Using CLI

Enter the following command to download Release 4.0 T1/E1 software to the T1/E1 module on your Passport 4400 unit:

```
CLI> download t1e1 download
```

Downloading Software Using the Passport 4400 Configurator

Procedure for Downloading Application Software Using the Passport 4400 Configurator



Note: This procedure works for downloading software at Release 4.0 and later. You cannot use the Passport 4400 Configurator for upgrading from Release 3.1.x and earlier.

Use the procedure below to download application code. The following steps must be performed:

- Commit the application code bank.
- Enter the IP Address of the TFTP host workstation that contains the download code files.
- Save the Current Configuration and Reset the Unit.

Commit the Application Code Bank

- 1 Click on *Administration*.

- 2 Click on *Code Bank*. The Code Bank window opens:

Code Bank

System Code Image Read From Bank: 2

Commit Bank: ▼

Save

- 3 Next to Commit Bank, use the pull down menu to select *1*.
Bank 2 is now uncommitted, and a subsequent application code download will write to Bank 2.
- 4 Click *Save*. A “*Command Successful*” appears.

Enter the IP Address of the TFTP Host Workstation that Contains the Download Code Files

- 1 Under Administration, click on *TFTP Operation*. The TFTP Operation window opens:

TFTP Operations [PUB SB]

Server IP Address:

Save

- 2 In the Server IP field, enter the IP address of the TFTP host workstation where the download code files reside.
- 3 Click *Save*. A “*Command Successful*” appears.
- 4 At the top of the window, click on *Code Download*. The TFTP Code Download window opens:

TFTP Code Download [PUB SB]

Filename:

- 5 In the Filename field, enter the filename and path (if applicable).
- 6 Click *Download (from Server)*. The TFTP Status window opens:

TFTP Status [PUB SB]

Current State: **Retrieving File**

Transfer Mode: **None**

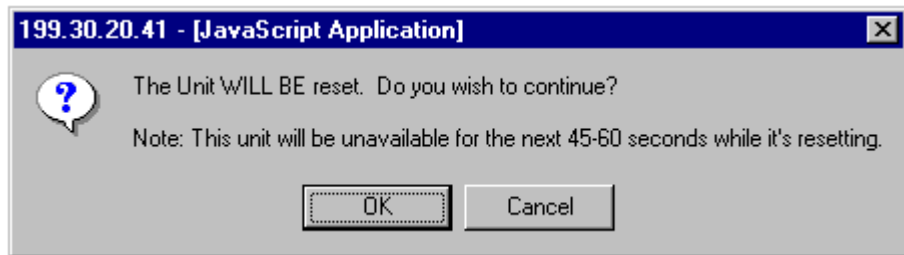
Last Transfer Status: **Transferring File**

This window displays the progress of the download process.

- 7 You must reset the unit and save the configuration. Refer to [Save the Current Configuration and Reset the Unit](#).

Save the Current Configuration and Reset the Unit

- 1 Click on *Administration*.
- 2 Click on *System Reset*. The System Reset window opens.
- 3 In the Reset Type field, use the pull down menu to select *Configuration*. Click *Reset*. A unit reset confirmation message is displayed.



- 4 Click *OK*. A display will show you the reset progress.



When the autoboot sequence begins, the newly-saved configuration in bank 4 will be read and loaded into DRAM, and the rollback timer will start.

Upgrading DSP Code and T1/E1 Module Software Using Passport 4400 Configurator

Configurator Procedure for Downloading the Local T1/E1 Software



Note: This procedure works only for downloading Release 4.0 and later software. You cannot use the Passport 4400 Configurator web pages for upgrading from Release 3.1.x and earlier.

- 1 To begin downloading local T1/E1 software, select *Configure*, *Voice*, and *System Action*.

- ▼ Configure
 - ▶ System
 - ▶ Physical Interfaces
 - ▶ WAN/Data
- Services
 - ▶ Protocols
 - ▼ Voice
 - ◆ Channels
 - ◆ ISDN BRI
 - ◆ T1 / E1
 - ◆ V / IP
 - ◆ System Action

You will see the Voice System Action window:

Voice System Action [Pub's B]

System Action:

- 2 At the top of the window, select the *T1E1 System Action* link. You will see the *T1E1 System Action* window:

T1E1 System Action [Pub's B]

System Action:

- 3 Use the pull down menu to select *download*.
- 4 Click *Save*. A “*Command Successful*” appears. The download is now being performed.

Configurator Procedure for Downloading the Local Voice Software



Note: This procedure works only for downloading Release 4.0 software and later. You cannot use the Passport 4400 Configurator web pages for upgrading from Release 3.1.x and earlier.

The following procedure executes a voice download for all voice channels. The Configurator does not perform specific voice channel downloads.

- 1 To begin downloading local voice software, select *Configure*, *Voice*, and *System Action*.

- ▼ Configure
 - ▶ System
 - ▶ Physical Interfaces
 - ▶ WAN/Data
- Services
 - ▶ Protocols
 - ▼ Voice
 - ◆ Channels
 - ◆ ISDN BRI
 - ◆ T1 / E1
 - ◆ V / IP
 - ◆ System Action

You will see the Voice System Action window:

Voice System Action [Pub's B]

System Action:

- 2 Use the pull down menu to *Download*.
- 3 Click on *Save*. A *Command Successful* appears. The download is now being performed.

Returning to Release 3.1.x

Returning to an earlier release is a difficult process, which should only be attempted by your Certified Distributor. All application files and configuration must first be removed using the bootup menu. Bootcode and image must then be downloaded to the unit. (50125969)

Upgrading Install Tool from Previous Releases

Install Tool is the recommended tool for initially configuring the basic services of your Passport 4400. It is sufficient to make the unit accessible within a Passport network. Install Tool Version 4.0 supports Release 4.0 and Release 3.1 of the Passport 4400 software. To install Install Tool, you must first remove the previous version of the software. Since configuration parameters are not stored in the software, you will not lose any previous configuration. Refer to *Using Passport 4400 Install Tool v4.0* for instructions in installing and initializing the software.

Passport 4400 and 6400 Interworking

For proper interworking between the Passport 4400, Release 4.0 and the Passport 6400, the following 6400 release levels are required:

- Release 5.1
- Release 5.0
- Release 4.2



Note: Support for Passport 6400 Release 4.2 and 5.0 is not available after June 30, 2000. For more information, contact your Certified Distributor or Account Manager.



Note: Not all Passport 4400 features are supported on all releases of Passport 6400. Check with your Certified Distributor or Account Manager to understand the feature set compatibility.



Note: When configuring FRDCE service with frame relay SVCs between a Passport 4400 and the Passport 6400, the Passport 4400 must be set to **Master**, and the Passport 6400 to **Slave**. Traffic Management with rate enforcement “enabled” allows for correct operation of the configured CIR bandwidth. (60107059)

Network Management

- OMS Release 4.0.1.
- NMS Release:
 - 11.3 C (You will need the 11.3 CD plus the 11.3C CD for 4400 management). This one is recommended for Release 4.0.
 - 11.2 (plus the NMS 11.2C companion CD).



Note: If you are using the SNMP Integrator for Passport 4400 Management in NMS 10.9, upgrading involves an HP OpenView-based solution. You will need HPOV 5.01 or 6.01 as part of the Passport 4400 data collection to feed into NMS.

Chapter 2

New Features and Software Enhancements

New Hardware Features for Release 4.0

Voice/Fax Switching Interface Module

Introduced in this release, this module combines an FXS interface with a line-sharing/fax-sharing unit, which permits a fax machine to receive a call from either a voice/fax channel in the Passport 4400 network or from the PSTN.

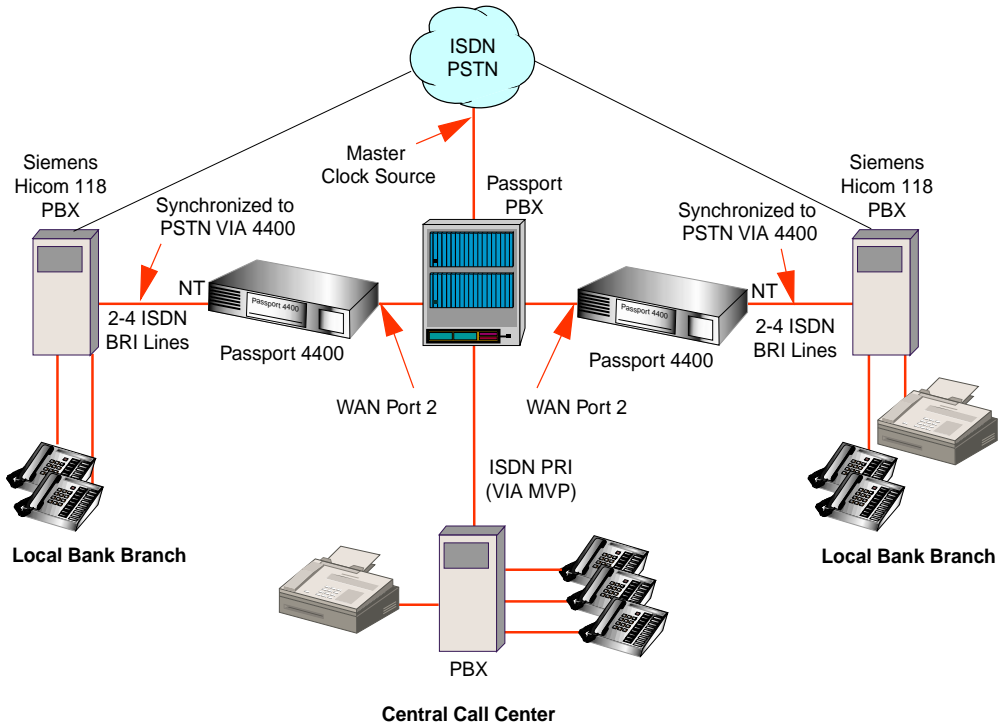
Hardware Data Compression

- SIMM that plugs into base module.
- Hi-fn (STAC) chip, providing a 2:1 compression ratio.
- Conforms to FRF.9.
- Additional compression achieved through idle flag suppression.
- Compression configurable for all RFC 1490 data streams such as SNA traffic, IP/IPX LAN traffic, and X.25 traffic.
- Modes 0, 1, and 2.

ISDN Module Update/Upgrade (NTAU76CA)

- External synchronization is now provided via a clock sync module (daughterboard) installed on the BRI module.
- No configuration required to operate this feature. The module will always look for its clock source from WAN 2 port when configured as NT.

- Requires Ethernet Base Module NTAU01CA Rev. 05 or later.



Note: The connections will depend on the specific site requirements. If you are not sure of the connections required for the Passport 4400 unit, consult your system administrator or Certified Distributor.



Note: Refer to the Manual Update section of these notes for additional information on this module.

New Software Features for Release 4.0

LEAPS (Legacy Access Protocol Services)

- New legacy services that connect directly to the base and HDM serial ports.

SNA Services

- SNA Services provide the Passport 4400 unit the ability to switch and transport SNA over SDLC and SNA over LLC2 (Ethernet). SNA data can be switched between local ports on the unit, or, data can be carried across the WAN over a PANL link or over a frame relay network. SNA SDLC supports the following:
 - multi-drop
 - local spoofing
- When sending SNA services over the WAN, either SDLC or LLC2, all packets are encapsulated in Boundary Access Node (BAN). BAN encapsulation allows connectivity to the following:
 - Passport 6400,
 - Bay router products, and
 - 3rd party FRADs.

X.25 Services

The X.25 services provide connectivity between X.25 data terminal equipment (DTE) over a Passport WAN (PANL). The X.25 services also support X.25 calls between a DTE connected to a Passport 4400 unit and a DTE connected to a FRAD over a frame relay network using RFC 1490 PVC conforming to ANSI T1.617a 1994 Annex G. The X.25 services include the following:

- local flow control
- local termination and spoofing
- switching to multiple destinations
- X.25 PVCs and SVCs

Async over TCP/IP (AOT)

- A wide area network protocol that enables transport of asynchronous data packets over a transmission control protocol/internet protocol (TCP/IP) network. TCP/IP transport provides built-in error correction.
- Can either be a point-to-point or multi-point interface.



Note: If a multi-point network is required, an AN/ARN router must be used as the multi-point node.

- X-on/X-off software controls/prevents data loss.

OSPF (Open Shortest Path First)

OSPF minimizes network convergence times within IP networks. OSPF is an IP routing protocol, classified as an Interior Gateway Protocol (IGP). This means that it distributes routing information between routers belonging to a single Autonomous System (AS). The OSPF protocol is based on link-state or Shortest Path First (SPF) technology. OSPF allows interworking with Passport 6400, Bay Routers, and third part FRADs/Routers.

IP Filtering and Prioritization

IP Prioritization is used in the Passport 4400 network to enhance the performance of various application packets. Application packets are often transferred with regular traffic. If priority control has not been configured, smaller packets are blocked by larger ones, which can cause long delays and packet loss.

IP Prioritization enables three SVCs utilizing high, medium, and low traffic management.

The IP traffic filtering and prioritization feature allows you to configure the prioritization of an IP packet based on the layer protocol type, source address, destination address, and port number.



Note: IP Prioritization is a PANL feature only.

Support for Dual DHCP Servers

This feature offers redundancy if the primary DHCP server is unreachable.

Auto Ring Down (ARD)

- When the telephone goes off-hook, the remote side rings with NO set up delay. This is used with Hoot N Holler for “nailed up” applications.
- Enables voice mail applications by passing the call through to the remote end causing the remote phone to ring. If there is no answer, the call will go to voice mail.

Premium Voice (Tandem Voice Passthrough)

- Compressed voice is now passed through a tandem PBX without decompression.
- PBX provides CCS switching without additional voice delay.



Note: This feature only works with another Passport 4400 with Release 4.0.

Voice over IP (VoIP)

- Voice over IP over Ethernet and frame relay.
- Voice over IP is a new service that allows voice calls to be transported within Ethernet LANs, the Internet, and corporate TCP/IP networks. This new service uses:
 - NAS/NAC (Directory Server) for automated look up and routing of calls,

- TOS (Type of Service) to help ensure QOS, and
- RTP (Real Time Protocol) provides end-to-end delivery services for IP packets with real-time requirements.
- Voice over IP and Voice over Frame Relay operate simultaneously in the same unit.
- Available in all Passport 4400 voice modules and voice services.



Note: VoIP is not supported over RFC 1490 PVCs.

Install Tool 4.0

- Now supports 4.0 features.
- Adds service-specific wizards.
- Increases the amount of information collected for the Passport 4400 regarding status and troubleshooting/diagnostic information.

Passport 4400 Configurator

The Passport 4400 Configurator is an embedded web server and HTML pages, which resides in the operating code of each Passport 4400 unit. Passport 4400 Configurator performs complete Passport 4400 device configuration, monitoring and diagnostics using Netscape Communicator Release 4.5 (with Navigator browser 4.08) or later and Internet Explorer 4.01 SP2 or later. Passport 4400 Configurator serves as an alternative to the Command Line Interface (CLI).



Note: Passport 4400 Configurator is released at Version 4.0. Some references in the documentation may reference Version 1.0; this was a preliminary version number. Version 1.0 and 4.0 are essentially the same.

Software Enhancements from the Previous Release

- Enhanced video support for CBR. You can now run video up to 512 Kb/s. Previously this was not supported.
- Increased RFC 1490 PVCs from one to twelve.
- CRC errors and CTS/RTS control signals now displayed via Command Line Interface.
- Backup Link Switchback timer is now configurable to 24 hours.
- Interdigit delay and Regeneration Delay Timers are now configurable from .1 sec (100ms).
- Management port parameters are now fixed at 8 data bits, 1 stop bit, no parity.

Chapter 3

Operational Notes/ Known Issues



To further ensure proper operation of the Passport 4400 4.0 software, please refer to the Passport 4400 Engineering Notes and Guidelines document, which can be found on the following Web site:

<http://esweb2.us.nortel.com/imds?pg=/prod/passport4000&view=TechnicalTools>

This document provides guidelines to proper integration of the Passport 4400 into your network, and offers suggested configuration settings based upon specified network scenarios.

Resets

In resetting the unit, it is recommended that you use the **reset system current** option to reset all the devices within the unit (hardware reset). In many cases, selecting **reset system cpu** is not adequate, because only the cpu software will reset.

General Operational Notes

- Changing the IP address of the unit without changing the PC dial-in IP address for the PPP over management port functionality may prevent access of the Configurator or Install Tool.
- Idle Character: In Release 4.0, the idle character default is now 126 (7E); to get a mark fill (FF), set your idle character to 255.

- When using the IP priority feature between the Passport 4400 and Passport 6400, a problem has been seen where the priority of an outgoing FTP file transfer tagged as *High* is erroneously tagged as *Low* when forwarded from the Passport 6400. This problem has only been seen with FTP and not with other types of IP traffic. It is being researched if this is a product defect or configuration issue. Contact your Certified Distributor or Account Manager for additional information and updates.
- Before opening/starting your Passport 4400 Configurator, ensure that “cookies” is enabled in your web browser (refer to your browser documentation).

SNA Services

- 60316562

In certain network configurations the host may poll the controllers before the Passport 4400 unit establishes SNA communications. Some SDLC PUs may not become active immediately. The PUs may require a second poll from the host in order to become active after the Passport 4400 unit is restarted.

One or more PUs may require an additional poll from the host before they will become active.

In order to reduce the amount of time the additional polls are sent from the host to the Passport 4400 unit, the poll timer can be set to a shorter interval. On the AS/400, within the controller description, the NDMPOLLTMR parameter can be set to a value of 1, which will cause the AS/400 poll the controller after 0.1 seconds, if there has been no response by the controller.

- 60322142

There is a known open issue with interworking to 3rd party FRADs and Routers, see [page 50](#) (60322142):

Voice Requirements

- Passport 4400 Network:
 - You must set up the NAS/NAC services prior to establishing a call across the network.
- Note that when you set the fax rate (in voice profile) to 9600, voice calls will have 13,000 b/s reserved bandwidth. Because of this, the number of calls permitted across the WAN will be reduced. In Release 4.0 and later, there is feature that disables the bandwidth allocation. Information on this feature is documented in the Configuration and Operation online documentation. Be very careful with this parameter as it permits bandwidth overbooking which can result in voice degradation.
- RSI Server DNA: Do not add any RSI servers with a DNA that duplicates an existing RSI server's DNA.
- Voice over IP (VoIP) is designed in this release for operation in only two ways:
 - As a gateway behind a router.
 - Connecting a frame relay and IP network together. (10309543)



Note: Do not use VoIP over RFC 1490.

- Passport 4400 Interworking with a Passport 6400:
 - You must provision the VNCS RSA/RSI services prior to establishing a call across the network.
 - Regardless of the configured fax rate, all calls from the Passport 6400 MVPs will have 10,800 b/s reserved bandwidth for the voice session. (10309543)
- When you have voice or fax operating over the network and you perform a save function (from CLI, Passport 4400 Configurator, or Install Tool), there will be a momentary loss of voice or fax quality. Your fax call may drop. (60107780)

Issues Resolved in Release 4.0

Install Tool

- **Issue Resolved:** The X.25 Annex G configuration and SNA RFC 1490 configuration screens did not check if the DLCI was already in use on the selected port. This caused a failure when part of the configuration was not completed. This has been resolved. (60102950)
- **Issue Resolved:** The SNA local screen only displayed one Link Station Address, although you could add as many as desired. The problem has been corrected. (60102887)
- **Issue Resolved:** When configuring Transparent CCS, Install Tool assumed that for a dual port E1 card, the signaling data was on Time Slot 16 of the L1 (Local) port. This has been resolved. (60104966)

System Software

- **Issue Resolved:** The trace log in the debug has been improved to capture and store information when a reset occurs. (10181419)
- **Issue Resolved:** The SNMP Agent did not generate a clear trap for traps cputilization or ramutilization. This no longer occurs. (10241428)
- **Issue Resolved:** Meridian 1, Release 24 did not work with Passport 4400 BRI voice applications. This is now fixed. (10284598)
- **Issue Resolved:** Unable to build trap rsiTrap. This is now resolved. (10304112)
- **Issue Resolved:** For every fax call made between Passport 6400 MVP and Passport 4400, the attribute frmLostInNetwork increases. This no longer occurs. (10307212)
- **Issue Resolved:** The Passport 4400 resetting from a HICOM PBX call no longer occurs. If a Call Setup Indication is received from the PBX as a BRI Interface Type in the Channel Identification IE, the call is rejected with Cause Code 66, Channel Type Not Implemented. (30131393)
- **Issue Resolved:** The parameter enums (for dcswitch) has been changed to disabled/enabled to be consistent with other objects in same table. (50134675)
- **Issue Resolved:** The parameter value for EgressString has been changed to 0 to 36. (50318825)

- **Issue Resolved:** The bandwidth utilization displayed for only one primary port when the `show system statistics` command was used. This is now corrected. (60082859)
- **Issue Resolved:** When the 56K CSU tx Out of Frame service was invoked and the PANL status displayed *Down*, the 56K link status displayed *Operational* instead of showing an alarm condition. This has been corrected. (60089712)
- **Issue Resolved:** IPX performance was degraded when the Passport 4400 unit was operating at 100% utilization. This has been corrected. Note: Please consult the Passport 4400 Engineering Guidelines document (URL: <http://esweb2.us.nortel.com/imds?pg=/prodpassport4000&view=TechnicalTools>) to make sure you have configured your Passport 4400 unit(s) to operate properly in your network. (60089850)
- **Issue Resolved:** E1 CSU set commands required the `save configuration update` and `system reset` commands before the parameter configuration took effect. This is now fixed. (60090108)
- **Issue Resolved:** The CLI show presentations were not accurate when you requested a show command after provisioning more than the maxdlcspeline configuration allowed. This is now fixed. (60090355, 60090367)
- **Issue Resolved:** When provisioning an ISDN BRI WAN interface as a *leased line* backup from the Passport 4400 to the Passport 6400, the PANL protocol fails to establish a connection. This is fixed in Release 4.0. (60090368)
- **Issue Resolved:** The CLI command `sh ipx rip cir t` was always 0 for Tx Pkts for all ipx circuits. This has been resolved. (60090878)
- **Issue Resolved:** The loopback feature for troubleshooting the ISDN BRI U interface is now functional. (60091331)
- **Issue Resolved:** The Passport 4400 unit continually output the message *reset dte 162* to the mb3XAP. This no longer occurs. (60096111)
- **Issue Resolved:** The voice channel status has been changed when the digital voice channel is not mapped to a T1/E1 timeslot. It was "pcmChannelNotInstalled" and now is "pcmChannelNotAssigned". (60096861)
- **Issue Resolved:** SDLC traffic: There was an extreme delay (300 sec.) before SDLC traffic began to pass through an RFC-1490 BAN network. The SDLC link now becomes active within one minute. (60099706)
- **Issue Resolved:** X.25 PVC stayed in 'out-of-order' state and required a reset. This no longer occurs. (60101926)

- **Issue Resolved:** MIB object rxQueueSize in the WAN MIB has been removed. Is is no longer supported. (60103118, 60103119)
- **Issue Resolved:** A memory leak was found: Basically, all **sh sna** commands caused a memory leak. Install Tool sent **sh sna** commands to a Passport 4400 unit continuously, and the operating system memory depleted very quickly. This no longer occurs. (60103672)
- **Issue Resolved:** Improvements have been made to show the correct remote voice channel status for Hoot N Holler applications. (60103821)
- **Issue Resolved:** LMI failed conformance test cases. This has been resolved and LMI now passes the conformance tests. (60104490, 60104492)
- **Issue Resolved:** The following CLI presentations have been corrected to show 1-36 as the range of options: (60314486)
 - set voice egressTable manipulationString
 - set voice egressTable phoneNumber
 - set voice ingressTable ingressNumber
 - set voice ingressTable ManipulationString
 - set voice nac cache egressString
- **Issue Resolved:** Frame relay CLI displayed a wrong name for attribute "TxPriority." This is now fixed. (60109523)
- **Issue Resolved:** The ISDN hardware revision 8 "U" interface now passes diagnostic after code download during initialization. (60314787)
- **Issue Resolved:** At the Central site, when the ISDN cable was removed, frame relay remained *up*. This no longer occurs. (60314963)
- **Issue Resolved:** GCM MIB correction: it was missing enums for object mcmGcmHwStatusIndex. (60316984)
- **Issue Resolved:** When committing software after downloading new operating code, the Passport 4400 displayed BRI voice channel trap frame sync loss traps erroneously. This has been corrected. (60317396)
- **Issue Resolved:** A BRI voice trap now occurs if the BRI hardware is defective. (60317451)
- **Issue Resolved:** PANL link synchronization was intermittently lost and recovered only after a node reset. PANL recovery has been corrected. (60317464)
- **Issue Resolved:** Setting the SNA llc inact timer to 0 no longer causes a bus error. (60317816)

- **Issue Resolved:** Voice parameters BckGrndNoiseLevel and SilenceHngOvrTime now migrate properly during an upgrade to a new software version of Passport 4400. (60317864)
- **Issue Resolved:** The BRI Voice Module statistics have two new statistic counters: Egrbufunderrun (egress overrun) and egrbufoverrun – (egress overrun). (60317918)
- **Issue Resolved:** Whenever the T1/E1 software residing on the module was different from the one in image bundle, a message prompted you to download the image software. This message sometimes did not show up and sometimes it was misleading. This is now corrected. (60318120)
- **Issue Resolved:** The BRI voice channel did not always complete a call successfully if the call was originated from an external ISDN network. This has been improved for calls from Passport 4400 to Passport 4400. A future upgrade to MVP is required for calls from a Passport 4400 to Passport 6400 to be successful (60318543)
- **Issue Resolved:** The ISDN backup port did not come up after being temporally set to *down* and *up* with CLI commands. This has been corrected. (60318790)
- **Issue Resolved:** After switching to an ISDN backup link and the primary link on port 2 went up and down, PANL connection sometimes did not recover until a node reset was invoked. This has been corrected. (60318813)
- **Issue Resolved:** With the BRI Voice Module in NT mode, during power up diagnostics for the Logical Interface Module (LIM) B, BVM/1 Failed. However, the hardware was operational. This has been corrected to reflect proper status of the diagnostics. (60318868)
- **Issue Resolved:** There is now a fix for the BRI Voice channel fax issue with Cannon model B100. (60319278)
- **Issue Resolved:** The ISDN backup intermittently failed to connect if physical cable was disconnected and connected. This has been resolved. (60319279)
- **Issue Resolved:** The branch node was configured with an SVC call where the DNA was set only to the DNA prefix of the remote side. After rebooting the branch side, the remote side reset after 10-20 minutes. The cause was the system ran out of stream buffers. This has been corrected. (60320321)
- **Issue Resolved:** The command **sh sy card** displayed an incorrect part number for the single port TVM. This has been corrected.

Open Known Issues

Passport 4400 Configurator

- **Note:** Passport 4400 Configurator requires **Netscape Communicator, Release 4.7** or later or **Microsoft Internet Explorer, Release 4.01 SP2** or later. Note that it does not work with Netscape *Navigator* 4.0.8 (even though the browsers carry the same release number). (60101711)

You may experience problems if using Netscape Navigator and resizing the Navigator Tree windows. Microsoft Internet Explorer does not exhibit these problems. (60107223, 60107227, 60107233)

- **Issue:** When using Win 98, you *may* need to manually switch between the PPP Adapter and the Ethernet NIC in order to establish the connection. This can be done using the winipcfg utility. (60098956)
- **Issue:** When using, Internet Explorer, the system reset progress bar does not update properly after resetting the Passport 4400 unit from the System Reset page.

Resolution: Use Netscape Communicator. This will be fixed in a future release.

- **Issue:** Unable to add a static route. There is a problem with the validation functions.

Resolution: Use the CLI to add static routes. This will be fixed in a future release.

Install Tool

- **Issue:** When both Install Tool and Telnet are used on a 9600 baud PPP connection, Telnet response will be slow. (60105799)

Resolution: Increase the baud rate on the management port to a higher speed (such as 38400). If this doesn't work for you, you can Telnet to the Passport 4400 unit outside the Install Tool application.

- **Issue:** A problem sometimes occurs when a configuration panel and a test panel are opened simultaneously on the same port. The flashing appears to affect all the ports and the backpanel display by flickering each in turn. Closing either window turns off all the flashing. The problem will be corrected in a future release. (60103370)

- **Issue:** Install Tool does not support the creation of virtual ports for “Basic” routing of IP on a Central or Regional site. It automatically turns on Easy-Routing on Interface 2 when the site is Regional or Central. (60104820)
- **Issue:** Install Tool chooses default priorities for the voice and data services it configures. It does not configure the IP Prioritization feature on a Passport 4400 unit. (60099843)

Resolution: You can do the basic setup using Install Tool, then use the Passport 4400 Configurator or the CLI to customize the data flow by creating new virtual ports and SVCs for the data you want to have at a different priority. This feature will be included in a future release.

- **Issue:** Microsoft Windows icons sometimes display improperly. There are several instances documented in the MS Developers Documentation where icons are displayed improperly. This is due to a problem with the “ShellIconCache” file saved by Windows on shutdown and re-loaded on startup. If this file gets corrupted (and simply changing the contents of an Icon file without changing the name can do it), icon display problems can occur. (For further information see article Q133733 in the Microsoft Developers documentation on their web page.) (60102656)

Resolution: To resolve this issue, restart the computer in MS-DOS, delete the ShellIconCache from the Windows/Winnt directory and then start windows.

- **Issue:** On Windows platforms with less than 128 MB of memory, and Windows managing virtual memory, you may need as much as 120 MB of disk space on the C: drive if your swap space, Windows directory, and Install Tool installation directory are all located on that drive. This memory is only used during installation; Install Tool uses only 20 MB or so after the installation finishes. Install the Install Tool on another drive, or free up enough room on the primary drive.
- **Note:** It is recommended that you delete ifIndex 147/149 if you are not using them. If they exist but are not used, Install Tool reports a yellow status for the port, indicating that one or more DLCIs are not functioning properly.

System Software

- **Issue:** Interworking problems with 3rd party FRADs and Routers. The Local Ring Number is currently set to null, which is an invalid entry. The SDLC service to 3rd party devices will not initialize. (60322142)

Resolution: This will be fixed in a special release. Contact your Certified Distributor or Account Manager for additional information.

- CBR and HTDS Sync Functions. The Passport 4455 running one or two 8-channel High Speed Data Modules (HDM) experience some problems when running CBR and HTDS. The current resolution is to use the 4-channel HDM. (10311756, 60315773)
- For the HTDS, CBR, SNA, and X.25 protocols: When the idle character is set to 255 the port will use mark fill instead of flag fill while the line is idle.
 - When using mark fill, RTS/CTS is raised when data is being sent, and lowered when there is no data to send. When using the NTAU18AA or NTAU19AA RS-232 cables, a modification of the DB-25 end of the cable may be needed if the attached device needs RTS/CTS high all the time.
 - A new to-DTE cable, NT0263AA (shown on [page 41](#)) has been created that sets CTS high, regardless of the idle character setting. This can be used in place of the NTAU19AA.
 - All other values for the idle character will use flag fill (hex 7E, decimal 126).
 - When using flag fill, RTS/CTS is held high at all times.

Existing applications using these protocols may need to change the idle character from the default of 255 to 126 to keep the same flag fill functionality found in previous revisions.

- **Issue:** Ping timing out. (60102211)

Resolution: When performing a ping, consider the following:

- If packets are too large, packet time out could occur.
- A large number of hops increases the probability of packet time out.
- Bandwidth availability on the Passport 4400. (Insufficient bandwidth could also cause packet time out.)

Any one of these items or a combination of two or more could result in a ping timing out.

- **Issue:** Meridian Release 24 does not work with Passport 4400 BRI voice applications. Release 23 has been fully validated with Passport 4400 Release 3.1 and 4.0. Testing in Simi Valley labs has determined that Meridian Releases 23 and 24 will not interwork together over the BRI using Qsig. (10284598)
- **Issue:** PVCs in the X.25 services might not recover properly when a reset is requested by the packet layer protocol or when a Reset command is issued from an X.25 terminal. The reset would normally occur after error conditions such as protocol violation, out of sequence errors, or network failure. (60101926, 6009611)

Resolution: If the PVCs do not recover, you can either issue a Restart command from an X.25 terminal, or you can reset the Passport 4400 unit. In either case, all calls are cleared.

- **Issue:** It is impossible to establish a call from a Passport 6400 to a Passport 4400 after an unspecified period of time. (30318566)
- **Issue:** The ARP table on the Passport 6400 displayed only one entry which was the lowest TP SPVC coming from the Passport 4400. Even though there is only one entry shown, the other two SPVCs were passing traffic. After several locks and unlocks of the DLCIs all 3 ARP entries will display. After a reboot of the Passport 4400, the Passport 6400 will display only the lowest priority entry again. (60320016)
- **Issue:** When deleting RFC 1490 tunnels more than one time and rebooting, the configuration table becomes corrupted. Adding tunnels does not cause any problems. (60319490)

Resolution: To work around the issue, currently use the following procedure:

- Upload the original configuration via ftp to a pc/workstation.
- Remove and add tunnels, or to simply remove more than one tunnel, do the following:
 - remove all undesired tunnels
 - add all new tunnels
 - save configuration update
 - reset the unit

If, in the future, you need to delete another tunnel, repeat the procedure.

Online Documentation

- **Issue:** Default window size causes problems with the text. (60105290)
Resolution: Set your browser window to 800 by 600 pixels or greater. Nortel Networks recommends that you maximize the window for optimal viewing.

Chapter 4

Corrections/Additions to the Documentation

Install Tool (800-1983-40)

Null Driver

- Locating the Null Driver: The Install Tool installation process copies the null modem driver to your Install Tool installation directory. (The name of the modem is **PP4400Direct**.) The file name is *PassportNullModem.inf*. (60109124)
- Null Modem Driver Troubleshooting Tip: When you install Install Tool for the first time on a Windows 95 or Windows 98 workstation, the installation process installs TCP/IP, Dial-Up Networking, and the Passport 4400 null modem driver for you.

The Problem

However, if you uninstall the null modem driver and then reinstall [Product Name (short)], the installation process does *not* automatically reinstall that driver. Consequently, you will be unable to configure a Dial-Up Networking connection between your workstation and the Passport 4400.

The Solution

To avoid this problem, perform the follow sequence of tasks before reinstalling Install Tool:

- a Go to the *Windows* directory.
- b Change the display attribute to show all files (including hidden files).
- c Go to the *Windows\inf* directory (normally, this directory is hidden).
- d Delete the *Windows\inf\passport.inf* file.
- e Change the *Windows* directory display attribute back to its normal state.

Once you remove the *passport.inf* file, the [Product Name (short)] installation process will automatically reinstall the null modem driver. (60109069)

Security Considerations

There are two security-related issues to consider when planning your Passport 4400 device management operations.

Community Strings

The Passport 4400 uses SNMP version 1 for all of its device management operations (configuring, monitoring, resetting, and so forth). SNMP version 1 uses community strings to control access to devices in a network. Since these are cleartext strings, they are relatively insecure.

You can use the Passport 4400 Configurator or the Passport 4400 CLI to change your community strings. However, since [Product Name (short)] does not include a provision to specify a community string, you cannot use [Product Name (short)] to access a Passport 4400 node whose community string has been changed from the default value (*private*). In this case, you must use either the Passport 4400 Configurator or the Passport 4400 CLI to access the unit. This will be corrected in a future release of Install Tool.

Dial-Up Connections

The Passport 4400 provides a PPP stack, thereby enabling access to Passport 4400 nodes through dial-up connections. This PPP implementation does not provide authentication controls. Therefore, if you connect a modem to a Passport 4400 to support a dial-up connection, that node becomes accessible to any remote host that knows the phone number of the modem and the community string of that node. Furthermore, any host that successfully connects to a dial-up port can potentially gain access to all devices that are visible to the Passport 4400.

It is recommended that you take appropriate measures to protect your network from unauthorized access. For example:

- If you access a Passport 4400 through a dial-up connection, disconnect the modem from the Passport 4400 at the completion of your session.
- Consider using a dial-back modem rather than a dial-up modem.

- Treat your community strings as passwords and manage them as you would any other password system.

For more information about dial-up connections, refer to Using the Passport 4400 Install Tool V4.0 (800-1983-40).

Hardware Installation

- The ISDN BRI Voice Module has been updated to the following:

The ISDN BRI Voice Module (IVM-BRI/ST/2 - NTAU76CA) provides the Passport 4400 unit with an ISDN interface for connection to an ISDN PBX, ISDN phone, or other ISDN protocol and provides external clocking capability.



Note: The NTAU76BA, the previous release of the module, did not provide the BRI clock sync module for external clocking.

Attention

The ISDN BRI Voice Module will not operate with the Passport 4455. It is used only with the Passport 4430 and Passport 4450.

The NTAU76C requires Ethernet Base Module NTAU01CA Rev. 05 or later.



Note: With a Passport 4450, if the ISDN BRI Voice Module is in the top slot, you must use Rev .03 or later.

The BRI module connects to the trunk side of an ISDN PBX, serving as one half of an ISDN tie trunk that connects two ISDN PBXs.

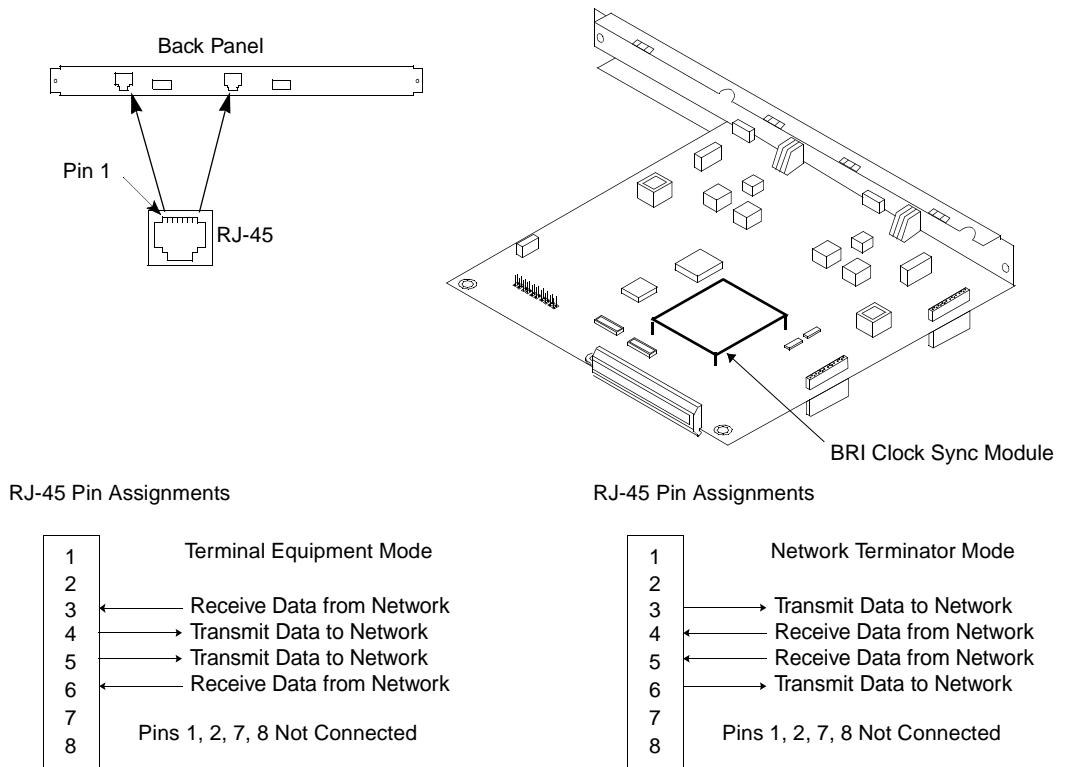


Figure 1 ISDN BRI Voice Module (S/T) and Pin Assignments

To ensure that your unit is equipped with the External Synchronization feature, check the part number tag on the face plate of the Ethernet Base Module. All units shipped from the factory after January 2000 to non-North American locations will have this modification. The tag should read NTAU01CA Revision level 05 (or higher). If there is any doubt about the unit you have, contact Nortel Networks Customer Service and refer to ECO E400399. They will let you know if the revision level of your unit includes the necessary features.



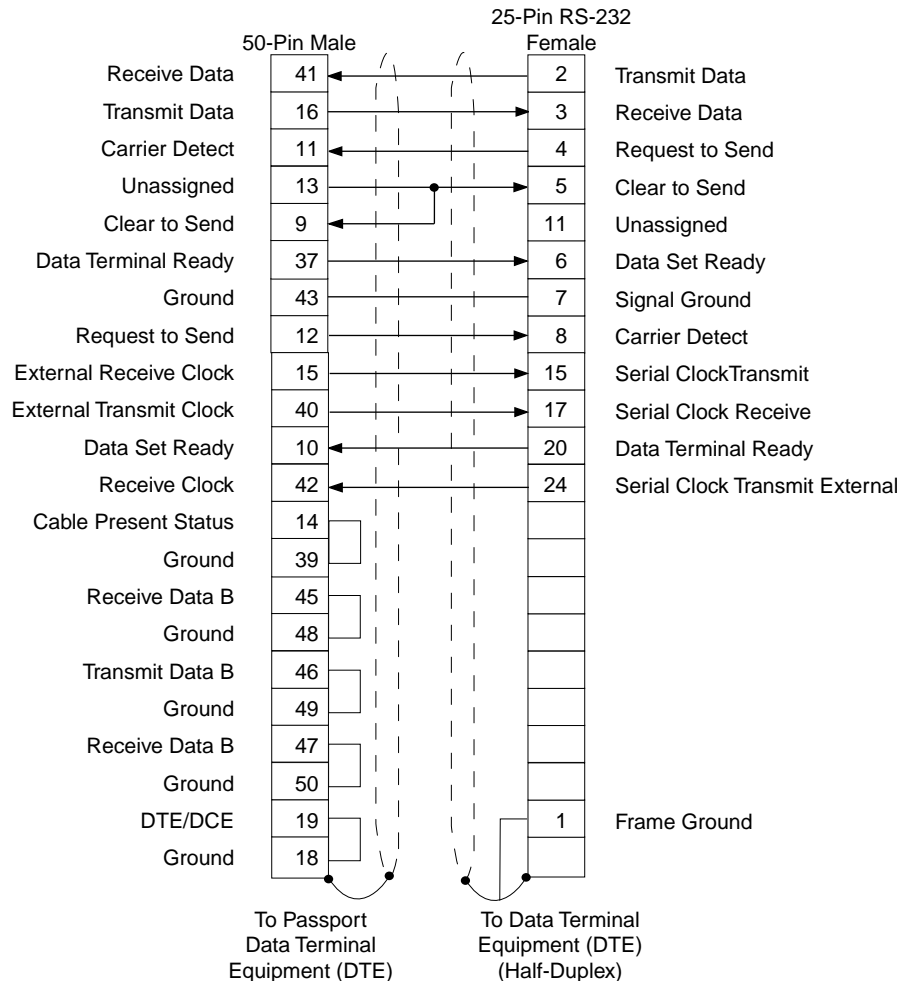
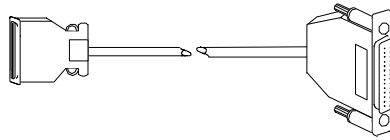
Note: If this module is installed in a unit that does not have a wiring change, it will revert to its internal clock and otherwise perform all other functions.

- The following table replaces Table 10-1 on page 10-2 of the Hardware Manual and now includes the ISDN BRI Module (60106517):

Table 1 Module Stacking Order

Module	Maximum Number in Unit	LIM (Logical Location)	Slot (Physical Location)	Stacking Rules to Follow
Analog Voice Module (AVM)	4	B, C, D, E	B, C, D, E	Anywhere
Universal Analog Voice Module (UAVM)	4	B, C, D, E	B, C, D, E	Anywhere
Digital Voice Expansion Module (DVEM)	2	C, D, E	C, D, E	Directly above TVM/EVM
T1 Voice Module or E1 Voice Module (TVM/EVM)	1	LIM B only	B, C, D, E	Anywhere
ISDN BRI Voice Module (IVM-BRI)	4	B, C, D, E	B, C, D, E	Must be directly above data modules, base module, or another ISDN BRI module
Legacy Data Expansion Module (LEM)	2	2, 3, 4	C, D, E	Directly above LDM
Legacy Data Module (LDM)	1	1, 2, 3, 4	B, C, D, E	Directly above EBM or HDM
High-Speed Data Module (HDM)	2	1, 2	B, C	Directly above EBM or other HDM
Ethernet Base Module (EBM)	1	N/A	A	Always at bottom

- The following cable, NTO263AA, has been added. This cable sets the CTS high regardless of the idle character setting. This can be used in place of the NTAU19AA.



Passport 4400 R4 Configuration and Operation Documentation (Online Documentation)

- When configuring FRDCE Service with frame relay SVC between a Passport 4400 and the Passport 6400, the Passport 4400 must be set to **Master**, and the Passport 6400 to **Slave**. Traffic Management with rate enforcement allows for correct operation of the configured CIR bandwidth. (60107059)
- Pathway: Voice Service → Switch Profiles → CLI Procedure for Setting the Voice Switch Profile Commands → (Main window) Auto Call Type → Next. Above the H4 “Configuration - at the Master End” (ref 60102653)



Note: The following is an example of how to set up a single Hoot N Holler channel. To configure multiple Hoot N Holler channels, each channel must have a unique switching profile number, and each switching profile must have a VNCS or NAS pointer.

- Pathway: VoIP → Setting Up → Initial VoIP Setup → next → next → next → next:

Select NAS as the Address Server in the Voice Switching Profile

From the Configurator:

Select Configure and Voice from the navigation menu:

- ◆ Main
- ▶ Attributes
- ▶ Administration
- ▼ Configure
 - ▶ System
 - ▶ Physical Interfaces
 - ▶ WAN/Data Services
 - ▶ Protocols
 - ▼ Voice
 - ◆ Channels
 - ◆ ISDN BRI
 - ◆ T1 / E1
 - ◆ V / IP
 - ◆ System Action
 - ◆ Transport
 - ◆ Overbooking

Click on *Channels*. You will see the Voice Channels screen:

Home (Outgoing) Profile Home (Incoming) Profile

Voice Channels (pubs)

Action	Card Slot	Channel Number	Voice Profile	Voice Profile (Interface Specific Param)	Switching Profile
Channel Action Modify	B	1	1	1	1

Voice Switching Profiles: [1] [Modify](#)

Voice Profiles (Common Parameters): [1] [Modify](#)

Voice Profiles (Interface Specific Parameters): [1] [Modify](#)

At Voice Switching Profiles, select the profile you intend to use for the VoIP channels and click on the Modify button. You will see the Voice Switching Profile screen. Change the Address Server to **NAS** and click on the Save button:

Voice Channels Home (Outgoing) Profile Home (Incoming) Profile

Voice Switching Profile (pubs)

Profile Number: 1

Outgoing Call Restriction: [None]

Incoming Call Restriction: [None]

Closed User Group Id (0..255): [0]

Restriction Class Code: [0]

Auto Call Number: [0]

Call Negotiation: [Specific]

Transmit Priority: [11]

Auto Call Type: [Normal]

Address Server: [VNCS]

Auto Ringdown: Disable ☐ Enable ☐

<<< Prev Save Next >>>

At this point, the VoIP configuration is complete. You must reset the Passport 4400 unit to put the configuration into effect.

From the CLI:

Enter the following command:

```
CLI> set voice switchingProfile addServerSelect
```

Parameter	Range of Values	Required Action
<Profile>	INTEGER (1..32)	Enter the number of the switching profile to be used for VoIP channels.
<addServerSelect>	nas vncs	Select nas for VoIP operation.

Example: **set voice switchingProfile addServerSelect 1 nas**

At this point, the VoIP configuration is complete. You must reset the Passport 4400 unit to put the configuration into effect.

- Pathway: Voice Services → T1/E1 → Diagnostics. The following procedure replaces the existing procedures:

Configurator Procedure for Using the Test Commands

To execute the system action parameters for the T1/E1 module, follow the Configurator procedures below:

- Click on *Configure, Voice*.



- b** Click on *System Action*. The Voice System Action window opens:

Voice System Action [Pub: B]

System Action:

- c** At the top of the window, click on *T1E1 System Action*. The T1E1 System Action window opens:
- d** Click on the desired setting from the dropdown menu and click on *Save*. A *Command Successful* message appears.

The following table describes the available options:

Parameter	Description
<i>Download</i>	Downloads T1/E1 Module software from the local image bundle.
<i>LED Test</i>	Initiates a T1/E1 Module LED Test.
<i>Stop LED Test></i>	Terminates a T1/E1 Module LED Test.
<i>Reset T1E1</i>	Resets the T1/E1 Module.

- Pathway: TOC or Contents (from Reference) → Administrating the SNA Services → Configurator Administration Functions → Defining SNA Parameters → Defining SDLC Link Station.

Revised Retry Sequence Function for Configurator

The retry sequence is set for the local SDLC link station. A retry sequence is a series of retransmitted frames, data, or control, for which no positive acknowledgement is received. The retry sequence starts with a series of slow polls, followed by an indefinite number of fast polls if no positive acknowledgement is received during the slow polls.

The retry sequence function is different from that described in the Configuring and Operating the Passport 4400 Software. Here is the correct description of the parameters affecting the retry sequence.

The retry sequence parameters are accessed from the Modify a SDLC Link Station screen:

Modify a SDLC Link Station [PUBSA]

SDLC Port: **Port 2 EBM**

Link Station Address: **11**

Local Name:

Group Poll Address: (0 - 254)

Reply Timeout: (10 - 255)

Rxmits per Retry Sequence: (0 - 128)

Retry Sequence Interval: (0 - 255)

Retry Sequence Count: (0 - 255)

RNR Limit: (0 - 65535)

RR Turn-Around Timer: (0 - 5000)

Poll I-Frame: Yes ☒ No ☐

The parameters involved with the retry sequence are,

- Rxmits per Retry Sequence
- Retry Sequence Interval
- Retry Sequence Count

Parameter	Range of Values	Default Value	Required Action
Rxmits per Retry Sequence	0..128	15	<p>Enter the number of retries in a retry sequence for the local SDLC link station.</p> <p>Related parameters:</p> <ul style="list-style-type: none">• Retry Sequence Interval• Retry Sequence Count <p>A retry sequence is a series of retransmitted frames, data or control, for which no positive acknowledgement is received. The retry sequence starts with a series of slow polls, followed by an indefinite number of fast polls if no positive acknowledgement is received during the slow polls.</p> <p>0 means no retries. If Rxmits per Retry Sequence is 0, then Retry Sequence Interval and Retry Sequence Count also must be 0.</p>

Parameter	Range of Values	Default Value	Required Action
Retry Sequence Interval	0..255	50	<p>Enter the length of time between retry sequences for the local SDLC link station. This parameter is effective only if Rxmits per Retry Sequence is greater than 1.</p> <p>Related parameters: Rxmits per Retry Sequence</p> <ul style="list-style-type: none">• Retry Sequence Count <p>For slow polls, the retry sequence interval is 4 times the value specified for this parameter, in milliseconds (example: $50 * 4 = 200$ milliseconds).</p> <p>For fast polls, the retry sequence interval is 2 times the value specified for this parameter, in milliseconds (example: $50 * 2 = 100$ milliseconds).</p> <p>Setting this parameter to a low value (less than 50) may impact overall CPU utilization of the Passport 4400 unit.</p>
Retry Sequence Count	0..255	40	<p>Enter the number of times a retry sequence is repeated for the local SDLC link station.</p> <p>Related parameters:</p> <ul style="list-style-type: none">• Rxmits per Retry Sequence• Retry Sequence Interval

- Pathway: TOC or Contents (from Reference) → Administrating the SNA Services → CLI Administration Functions → Defining SDLC Link Station.

Revised Retry Sequence Function for the CLI

The retry sequence is set for the local SDLC link station. A retry sequence is a series of retransmitted frames, data, or control, for which no positive acknowledgement is received. The retry sequence starts with a series of slow polls, followed by an indefinite number of fast polls if no positive acknowledgement is received during the slow polls.

The retry sequence function is different from that described in the Configuring and Operating the Passport 4400 Software. Here is the correct description of the parameters affecting the retry sequence.

The retry sequence parameters are accessed from the Modify a SDLC Link Station screen.

The parameters involved with the retry sequence are,

- define sna sdhc linkstation mRetries
- define sna sdhc linkstation nRetries
- define sna sdhc linkstation tRetries

```
CLI> define sna sdhc linkstation mRetries
```

Parameter	Range of Values	Required Action
<lflIndex>	Integer (1..255)	Enter the lflIndex of the link station.

Parameter	Range of Values	Required Action
<Address>	Integer (1..254)	Enter the link station address (in decimal).
<MRetries>	Integer (0..128)	<p>Enter the number of retries in a retry sequence for the local SDLC link station.</p> <p>Related parameters:</p> <ul style="list-style-type: none"> • define sna sdhc linkstation tRetries • define sna sdhc linkstation nRetries <p>A retry sequence is a series of retransmitted frames, data or control, for which no positive acknowledgement is received. The retry sequence starts with a series of slow polls, followed by an indefinite number of fast polls if no positive acknowledgement is received during the slow polls.</p> <p>0 means no retries. If mRetries is 0, then tRetries and nRetries also must be 0.</p> <p>The default value is 15.</p>

```
CLI> define sna sdhc linkstation nRetries
```

Parameter	Range of Values	Required Action
<IfIndex>	Integer (1..255)	Enter the IfIndex of the link station.
<Address>	Integer (1..254)	Enter the link station address (in decimal).
<NRetries>	Integer (0..255)	<p>Enter the number of times a retry sequence is repeated for the local SDLC link station.</p> <p>Related parameters:</p> <ul style="list-style-type: none"> • define sna sdhc linkstation mRetries • define sna sdhc linkstation tRetries <p>The default value is 40.</p>

```
CLI> define sna sdlc linkstation tRetries
```

Parameter	Range of Values	Required Action
<IfIndex>	Integer (1..255)	Enter the IfIndex of the link station.
<Address>	Integer (1..254)	Enter the link station address (in decimal).
<TRetries>	Integer (0..255)	<p>Enter the length of time between retry sequences for the local SDLC link station.</p> <p>Related parameters:</p> <ul style="list-style-type: none">• define sna sdlc linkstation mRetries• define sna sdlc linkstation nRetries <p>This parameter is effective only if mRetries is greater than 1.</p> <p>For slow polls, the retry sequence interval is 4 times the value specified for this parameter, in milliseconds (example: 50 * 4 = 200 milliseconds).</p> <p>For fast polls, the retry sequence interval is 2 times the value specified for this parameter, in milliseconds (example: 50 * 2 = 100 milliseconds).</p> <p>Setting this parameter to a low value (less than 50) may impact overall CPU utilization of the Passport 4400 unit.</p> <p>The default value is 50.</p>

Passport 4400 Release Notes for R4.0

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